Hygienic Water Use

Provision of water, that is safe for human consumption and the pending phase-in of regulatory requirements may place significant demands on the performance of existing waterworks systems. Existing waterworks, particularly those that are nearing the end of their projected working life, may require upgrading to meet future water quality standards in four to eight years. In some cases, the cost of such upgrades may be significant and alternative ways of providing water for consumptive use may be more practical and timely at solving drinking water quality problems.

Application and Requirements

The Water Regulations, 2002 allow the provision of water for hygienic use in certain situations, however a permit must first be obtained from Saskatchewan Environment (SE). Waterworks owners cannot self-declare the systems which they operate as hygienic-use whether or not their system was previously classified as a potable or non-potable waterworks. The hygienic use category may only be applied to waterworks in operation or existence when the new regulations came into force (December 5, 2002). Construction of a new hygienic use waterworks is not allowed.

Water provided by hygienic use systems may only be used for bathing, personal hygiene and showering or less critical water uses. Water supplied for hygienic use cannot be used for human consumptive uses such as drinking, cooking, food preparation and oral hygiene whether or not it is intended for those uses. Any use of water provided by a waterworks for any human consumptive use results in that system being classified as a human consumptive use system. The status of a hygienic use system, once granted, will revert to human consumptive use if it is discovered that any consumers served by the system are using the water for human consumptive purposes. Further compliance and enforcement measures may also be applied.

Water provided for hygienic use (where permitted) must be provided by a system approved by SE and that system must be operated and maintained in accordance with the regulations by the permittee of the works. Owners of hygienic use waterworks using surface water sources or groundwater sources under the influence of surface water must disinfect the water supply. Where groundwater is used as a source of water, most often disinfection will also be required. At least 0.1 milligrams per liter (mg/L) of free chlorine residual must be achieved for water entering the distribution system and 0.1 mg/L of free chlorine residual or 0.5 mg/L total chlorine residual must be maintained throughout the distribution system.

In cases where SE permits hygienic use status for a municipal waterworks or municipal well connected to a distribution system, an alternative supply of safe drinking water must be provided to consumers. SE may apply this condition for other types of hygienic use waterworks. In all cases, the owner must also notify consumers of the restrictions on water use at least twice every year, provide self-adhesive water use advisory labels for attachment near taps, post all publicly accessible standpipes and fill pipes and advise the Minister (of SE) on an annual basis of measures taken to notify water consumers of the restrictions on water use.

The Environmental Management and Protection Act, 2002 and *The Water Regulations* introduce hygienic use waterworks as a new category of legally mandated waterworks in Saskatchewan.

This fact sheet provides information to aid in the understanding of the potential application and requirements pertaining to waterworks that may be classified by SE as hygienic use systems.

For more information, please contact the Environmental Project Officer responsible for regulation of your waterworks or the Drinking Water Quality Section at (306) 787-6504

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Saskatchewan Environment
Environmental Protection Branch

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Other requirements that apply to permitted hygienic use waterworks include:

- ✓ meeting the equipment, operation and maintenance requirements for wells, water pipes, storage reservoirs, water treatment facilities and pump houses found in the regulations;
- ✓ water quality monitoring and ongoing provision of water which meets bacteriological water quality standards including:
  - o zero total coliforms per 100 millilitres;
  - o zero fecal coliforms per 100 milliltres; and
  - o less than 200 background bacteria per 100 millilitres;
- ✓ immediate reporting of any water treatment process or distribution system upsets that may affect the acceptability of water for hygienic use. Immediate reporting of any low disinfectant levels or failure of disinfection equipment is also required;
- ✓ reporting of bacteriological monitoring results to SE and appropriate follow-up as directed if problems are detected;
- ✓ disinfection and testing for bacteriological safety after alteration or repair of the system;
- ✓ comprehensive record-keeping and record management with respect to the operation of the waterworks. Monthly review of the waterworks records to ensure the facility's operational requirements and bacteriological water quality are being achieved. Reporting to SE is required if operational or water quality requirements are not achieved; and
- ✓ provision of an annual notice to consumers on the quality of water provided and compliance with the permit sample submission requirements.

How to Apply for Hygienic Use Status for a Waterworks

Waterworks owners should provide the following information, to SE's EcoRegion Environmental Project Officer, to assist the decision regarding the application for hygienic water use status: (Typically, hygienic use status will only be granted to waterworks serving less than 50 persons or 15 service connections and in the absence of places of public assembly).

- ✓ number of persons served and the number of service connections on the waterworks;
- ✓ age, type and condition of the waterworks system presently in use;
- ✓ water source for the waterworks, recent raw water and treated water quality information, trends in water quality over seasons including the existence of any short or long-term water quality concerns. This can also include information for water provided by others through a pipeline or other form of water supply agreement;
- ✓ use of disinfection on the system and record of disinfectant concentrations over an annual period at remote points in the system;
- ✓ information on type of service connections and the use of water provided by the system (ie. are there service connections for domestic use, commercial use and industrial use? Are there any places of public assembly such as town halls, sports arenas, schools, hospitals, restaurants or similar facilities served by the waterworks);
- ✓ existence of any point-of-use or point-of-entry water treatment systems;
- ✓ proposed alternative means for provision of safe drinking water which may include bottled water pail fill systems, or other options including point-of-use or point-of-entry systems in some situations;
- ✓ studies which examine the present water supply use in the community or system and the cost effectiveness of operating a hygienic system in conjunction with the provision of an alternate source of drinking water, population trends and age distribution; and
- ✓ any other information that may be required by SE.

Completion of the Application for Approval to Construct or Operate an Existing Waterworks may aid SE in making decisions regarding the consumptive or hygienic status of a waterworks. In some instances, completion of a waterworks assessment may be valuable in obtaining an up-to-date evaluation of the waterworks' condition and capability. In most instances, a public meeting to inform water consumers and discuss the nature of hygienic use will be required in advance of any decisions to grant or deny an application.